### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-010243 Address: 333 Burma Road **Date Inspected:** 13-Nov-2009

City: Oakland, CA 94607

**OSM Arrival Time:** 645 **Project Name:** SAS Superstructure **OSM Departure Time:** 1845 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG** Trail Assembly

### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath. Math. was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Assembly Area

Signed Off Green Tag's

This Quality Assurance (QA) Inspector witnessed final tension verification for following depicted locations. Inspected 10% on a random basis and found the tension to be in general compliance and thus signed off the Green Tags.

At Segment 5AW to 5BW from Panel Point 29 to 34 for Corner Assembly Cross Beam Brace (North and South) and Bolt Size used was M22 x 55 RC Set# DHGM220044 and final torque required was 473 N-m and Green Tag No. 414.

At Segment 5AW to 5BW from Panel Point 29 to 34 for Corner Assembly Cross Beam Brace (North and South) and Bolt Size used was M22 x 85 RC Set# DHGM220047 and final torque required was 427 N-m and Green Tag No. 415.

## WELDING INSPECTION REPORT

(Continued Page 2 of 3)

At Segment 5AW to 5BW from Panel Point 29 to 34 for Corner Assembly Cross Beam Brace (North and South) and Bolt Size used was M22 x 120 RC Set# DHGM220051 and final torque required was 433 N-m and Green Tag No. 416.

At Segment 5AW to 5BW from Panel Point 29 to 34 for Corner Assembly Cross Beam Brace (North and South) and Bolt Size used was M24 x 60 RC Set# DHGM220014 and final torque required was 567 N-m and Green Tag No. 417.

At Segment 5AW to 5BW from Panel Point 29 to 34 for Corner Assembly Cross Beam Brace (North and South) and Bolt Size used was M24 x 65 RC Set# DHGM220009 and final torque required was 567 N-m and Green Tag No. 418.

At Segment 5AW to 5BW from Panel Point 29 to 34 for Corner Assembly Cross Beam Brace (North and South) and Bolt Size used was M24 x 80 RC Set# DHGM220011 and final torque required was 533 N-m and Green Tag No. 419.

At Segment 1AE to 1BE from Panel Point 10 to 10.5 for Vertical Segment Splice to Longitudinal Diaphragm (North and South) and Bolt Size used was M22 x 75 RC Set# DHGM220005 and final torque required was 473 N-m and Green Tag No. 421.

At Segment 1AE to 1BE from Panel Point 10 to 10.5 for Vertical Segment Splice to Longitudinal Diaphragm (North and South) and Bolt Size used was M24 x 75 RC Set# DHGM240020 and final torque required was 600 N-m and Green Tag No. 422.

At Segment 1AE to 1BE from Panel Point 10 to 10.5 for Vertical Segment Splice to Longitudinal Diaphragm (North and South) and Bolt Size used was M24 x 100 RC Set# DHGM240022 and final torque required was 527 N-m and Green Tag No. 527.

At Segment 1AE at Panel Point 10 for Traveler Rail Bracket Bike Path Side and Bolt Size used was M22 x 120 RC Set# DHGM220008 and final torque required was 413 N-m and Green Tag No. 424.

At Segment 1AE at Panel Point 10 for Traveler Rail Bracket Bike Path Side and Bolt Size used was M22 x 130 RC Set# DHGM220055 and final torque required was 513 N-m and Green Tag No. 425.

At Segment 1AE at Panel Point 10 for Traveler Rail Bracket Bike Path Side and Bolt Size used was M22 x 160 RC Set# DHGM220006 and final torque required was 340 N-m and Green Tag No. 426.

Segment 5AE to 5BE

This QA Inspector measured and recorded the misalignment and offset for the Side Panel to Side Panel T-Rib for Side Panel (Cross Beam and Bike Path side) prepared report in the T-Rib dimension SURVEY ON T-RIB FOR OBG Segment 5AE to 5BE between PP 31 to 32 and submitted the records to Engineer for review.

Segment 2AW

## WELDING INSPECTION REPORT

(Continued Page 3 of 3)

This QA Inspector observed at Segment 2AW at PP 16 Counter Weight side for Longitudinal Diaphragm LD 17C the flatness of Web plate on North Longitudinal Diaphragm LD17C on 2AW observed 5mm, which exceeded the requirement. However the Heat Straightening was not performed by ZPMC as X76N and the web plate were welded. As a result, LD017-001-007/008 PCMK X76N needs to be cut and the work was performed against Welding Repair Report B-WR8558 Rev. 0.

Note: Added this activity in Punch list and submitted to Engineer for review.

#### Segment 5BW

This QA Inspector observed at Segment 5BW at PP 33 Cross Beam side T-Rib to T-Rib for Side Panel below the Floor Beam the T-Rib above the Cope Hole was deformed up to 4 to 5mm measured at every locations total 19 nos. out of which 11th T-Rib, 17th T-Rib and 19th T-Rib the measurement were informed to the SMR for their further review.

### Segment 5BW

This QA Inspector observed at Segment 5BW at PP 34 Cross Beam side T-Rib to T-Rib for Side Panel below the Floor Beam the T-Rib above the Cope Hole inspection has been performed to confirm any deformation at every locations i.e., total 19 nos. and observed within the deformation is within tolerance.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

# **Summary of Conversations:**

No relevant conversations.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact, who represents the Office of Structural Materials for your project.

<b>Inspected By:</b>	Math, Manjunath	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer